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PART V THICK BOTTOM UTENSILS

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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SPECIFICATION FOR WROUGHT ALUMINIUM UTENSILS
PART V THICK BOTTOM UTENSILS

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Indian Standard

SPECIFICATION FOR WROUGHT ALUMINIUM UTENSILS

PART V THICK BOTTOM UTENSILS

0. FOREWORD

0.1 This Indian Standard (Part V) was adopted by the Indian Standards Institution on 30 August 1966, after the draft finalized by the Utensils Sectional Committee had been approved by the Consumer Products Division Council.

0.2 The wrought aluminium utensils for general purposes have been covered in IS : 1660-1960*, which includes many types of aluminium utensils used in ordinary household. Some of the sizes of *DEGCHIES*, frying-pans, saucepans and kettles especially of thicker gauges are suitable for big establishments but due to the rigorous use on open coal, gas and firewood fires, etc, the utensils will have to be of thick bottom.

0.3 Conventional types of utensils, during their drawing or pressing, get a wall thickness smaller than the bottom. It is, however, felt that the reduction in thickness does not contribute much to the economy of the material. While rigorous use of aluminium utensils demand thick bottom, considerably reduced thickness of the wall should be adequate for most purposes. Special equipment produces such utensils and these utensils are already in use in various parts of the world including India as the life expectancy of these utensils is very long.

0.4 Attention is invited to clause 7.1, which calls for agreement between the purchaser and the supplier and which permits the purchaser to use his option for selection to suit his requirements.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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*Specification for wrought aluminium utensils. (Since revised and split into various parts).

†Rules for rounding off numerical values (*revised*).

1. SCOPE

1.1 This standard (Part V) covers the requirements of thick bottom aluminium utensils, namely, *DEGCHIES*, frying-pans, saucepans and kettles.

2. MATERIAL

2.1 The utensils shall be fabricated from aluminium sheets/circles conforming to IS : 21-1959*. Cast aluminium parts shall conform to IS : 20-1959†.

3. FABRICATION

3.1 The thick bottom utensils shall be of one piece construction and shall be formed from the material of thickness not less than that specified in col 3 of Table 1. Where welding is involved, it shall be done without any damage to the vessel. Spouts and handles shall be securely and suitably joined to the body and there shall be no leakage at the joints.

TABLE 1 THICKNESS OF THICK BOTTOM ALUMINIUM UTENSILS

(*Clauses* 3.1 *and* 4.1)

Sl No.	Article	Bottom Thickness	Thickness of Wall at the Top Edge	Lid Thickness
(1)	(2)	(3)	(4)	(5)
		mm	mm	mm
i)	*DEGCHI*:			
	a) Standard quality	5	2·5	2·00
	b) Utility quality	2·5	1·25	1·25
ii)	Frying-pan	5	2·5	1·25
iii)	Saucepan	5	2·5	1·25
iv)	Kettle	4	2·0	1·25

NOTE — Tolerances on all thicknesses: $^{+10}_{-5}$ percent.

4. THICKNESS

4.1 The thickness of the bottom, wall and the lid of the various utensils shall be in accordance with Table 1.

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*Specification for wrought aluminium and aluminium alloy for utensils (*second revision*). (since revised).

†Specification for cast aluminium and aluminium alloy for utensils (*second revision*).(since revised).

5. WORKMANSHIP AND FINISH

5.1 The utensils shall be frosted or dull finished. They shall be reasonably free from dents, wrinkles, burrs, scratches, tool or hammer marks and other surface defects.

6. MARKING

6.1 Each utensil shall be legibly and indelibly stamped at a suitable place with the manufacturer's name or registered trade-mark.

6.1.1 The utensil may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. SAMPLING

7.1 Sampling and acceptance criteria for thick bottom aluminium utensils shall be as agreed to between the purchaser and the supplier. A recommended scheme for the same is given in Appendix A.

APPENDIX A

(*Clause* 7.1)

RECOMMENDED SAMPLING SCHEME AND CRITERIA FOR CONFORMITY FOR THICK BOTTOM ALUMINIUM UTENSILS

A-1. LOT

A-1.1 In any consignment, all the thick bottom aluminium utensils, of same shape and size, manufactured from the same grade of aluminium and under similar conditions of production, shall be grouped together to constitute a lot.

A-2. SELECTION OF SAMPLE

A-2.1 The number of utensils to be selected at random from the lot shall depend upon the size of the lot, according to col 1 to 4 of Table 2.

A-3. CRITERIA FOR CONFORMITY

A-3.1 The number of utensils in the first sample (*see* col 2 and 3 of Table 2) shall be first examined for thicknesses of bottom, wall and lid (*see* 4.1), and workmanship and finish (*see* 5.1). If in the first sample the number of defectives (failing to satisfy any one or more of the requirements) is less than or equal to the corresponding acceptance number *a* (col 5 of Table 2), the lot shall be considered as conforming to the requirements of the specification. If the number of defectives in the first sample is greater than or equal to the corresponding rejection number *r* (col 6 of Table 2), the lot shall be considered as not conforming. If the number of defectives in the first sample lies between the corresponding values of *a* and *r*, a second sample (*see* col 2 and 3 of Table 2) shall be selected and examined for the requirements. If in the combined sample, the number of defectives is less than or equal to the corresponding acceptance number *a*, the lot shall be considered as conforming. If the number of defectives is greater than or equal to the corresponding rejection number *r*, the lot shall be considered as not conforming.

TABLE 2 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

LOT SIZE (1)	SAMPLE (2)	SAMPLE SIZE (3)	CUMULATIVE SAMPLE SIZE (4)	ACCEPTANCE NUMBER (*a*) (5)	REJECTION NUMBER (*r*) (6)
Up to 50	First	8	8	0	2
	Second	8	16	1	2
51 ,, 100	First	13	13	0	2
	Second	13	26	1	2
101 ,, 150	First	20	20	0	3
	Second	20	40	3	4
151 ,, 300	First	32	32	1	4
	Second	32	64	4	5
301 ,, 500	First	50	50	2	5
	Second	50	100	6	7
501 and above	First	80	80	3	7
	Second	80	160	8	9

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